

Siefke, Samuel

From: Soderquist, Arlen
Sent: Wednesday, February 09, 2005 4:22 PM
To: Siefke, Samuel

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NEWS 3 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
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NEWS 5 NOV 30 PHAR reloaded with additional data
NEWS 6 DEC 01 LISA now available on STN
NEWS 7 DEC 09 12 databases to be removed from STN on December 31, 2004
NEWS 8 DEC 15 MEDLINE update schedule for December 2004
NEWS 9 DEC 17 ELCOM reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 10 DEC 17 COMPUAB reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 11 DEC 17 SOLIDSTATE reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 12 DEC 17 CERAB reloaded; updating to resume; current-awareness
alerts (SDIs) affected
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NEWS 15 DEC 30 CAPLUS - PATENT COVERAGE EXPANDED
NEWS 16 JAN 03 No connect-hour charges in EPFULL during January and
February 2005
NEWS 17 JAN 26 CA/CAPLUS - Expanded patent coverage to include the Russian
Agency for Patents and Trademarks (ROSPATENT)

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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FILE 'HOME' ENTERED AT 16:15:27 ON 09 FEB 2005

=> file ca

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

| ENTRY | SESSION |
|-------|---------|
| 0.21 | 0.21 |

FILE 'CA' ENTERED AT 16:15:36 ON 09 FEB 2005
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FILE COVERS 1907 - 3 Feb 2005 VOL 142 ISS 7
FILE LAST UPDATED: 3 Feb 2005 (20050203/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s amino acid homopolymers/ti and capillary gel electrophoresis/ti
    180603 AMINO/TI
        6 AMINOS/TI
    180607 AMINO/TI
        ((AMINO OR AMINOS)/TI)
    788601 ACID/TI
    261645 ACIDS/TI
    1029410 ACID/TI
        ((ACID OR ACIDS)/TI)
    1180 HOMOPOLYMERS/TI
    11 AMINO ACID HOMOPOLYMERS/TI
        ((AMINO(W)ACID(W)HOMOPOLYMERS)/TI)
    37582 CAPILLARY/TI
    2379 CAPILLARIES/TI
    39722 CAPILLARY/TI
        ((CAPILLARY OR CAPILLARIES)/TI)
    65915 GEL/TI
    18609 GELS/TI
    83742 GEL/TI
        ((GEL OR GELS)/TI)
    37426 ELECTROPHORESIS/TI
    242 CAPILLARY GEL ELECTROPHORESIS/TI
        ((CAPILLARY(W)GEL(W)ELECTROPHORESIS)/TI)
L1      1 AMINO ACID HOMOPOLYMERS/TI AND CAPILLARY GEL ELECTROPHORESIS/TI
```

=> d his

(FILE 'HOME' ENTERED AT 16:15:27 ON 09 FEB 2005)

FILE 'CA' ENTERED AT 16:15:36 ON 09 FEB 2005

L1 1 S AMINO ACID HOMOPOLYMERS/TI AND CAPILLARY GEL ELECTROPHORESIS/

=> d bib,ab

L1 ANSWER 1 OF 1 CA COPYRIGHT 2005 ACS on STN

Full Text <http://chemport.cas.org/cgi-bin/cp_sdcgi?

[fjap4TPzj4iTohLT5UiKGUgZ2onlyYjWJbfZI83nrYQx69JYBvxmMRFDQYlWLbqZKHDcQRSi2gNpc9VdR5B10R1LXEnVvkCtOJ7yRjxsmNhM9bAj5RHnvdDTabvDoNXmVwUYHKSezG6fGixRP6OP7PEEGEA](http://chemport.cas.org/cgi-bin/cp_sdcgi?fjap4TPzj4iTohLT5UiKGUgZ2onlyYjWJbfZI83nrYQx69JYBvxmMRFDQYlWLbqZKHDcQRSi2gNpc9VdR5B10R1LXEnVvkCtOJ7yRjxsmNhM9bAj5RHnvdDTabvDoNXmVwUYHKSezG6fGixRP6OP7PEEGEA)>

AN 118:142831 CA

TI Separation of **amino acid homopolymers** by **capillary gel electrophoresis**
 AU Dolnik, Vladislav; Novotny, Milos V.
 CS Dep. Chem., Indiana Univ., Bloomington, IN, 47405, USA
 SO Analytical Chemistry (1993), 65(5), 563-7
 CODEN: ANCHAM; ISSN: 0003-2700
 DT Journal
 LA English
 AB Gel-filled capillaries using highly concd. and moderately cross-linked acrylamide-type gels in capillary electrophoresis were successfully applied to the sepn. of the individual oligomers of various poly(amino acids). Mixts. of both anionic and cationic nature were adequately resolved. While UV detection at 220 nm was mostly used, the polyanions with N-terminal groups can also be tagged with 3-(4-carboxybenzoyl)-2-quinolinecarboxaldehyde (CDQCA) for a more sensitive detection by a laser-induced fluorescence detector.

=> log y

| | | |
|--|------------|---------|
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 14.17 | 14.38 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | -0.68 | -0.68 |

STN INTERNATIONAL LOGOFF AT 16:16:49 ON 09 FEB 2005

STN Columbus

L4 2364 L3 OR POLYASPARTIC OR POLYASPARTATE OR POLY(2A) (ASPARTIC OR
 ASPARTATE)
 L6 137 L4(5A) (DETECT? OR DETERMIN? OR MEASUR? OR MONITOR? OR ASSAY? OR
 TEST? OR ANALY? OR ESTIMAT? OR EVALUAT? OR SENSE# OR SENSOR OR
 SENSING OR IDENTIF? OR PROBE# OR PROBING OR QUANTITAT? OR QUANTI
 F? OR ASSESS? OR EXAMIN? OR CHECK?)

=> d his

(FILE 'HOME' ENTERED AT 15:29:48 ON 09 FEB 2005)
 FILE 'REGISTRY' ENTERED AT 15:29:58 ON 09 FEB 2005
 L1 263 S ASPARTIC ACID AND HOMOPOLYMER
 L2 115 S L1 NOT ESTER
 L3 99 S L2 NOT COMPD
 FILE 'CA' ENTERED AT 15:41:32 ON 09 FEB 2005
 L4 2364 S L3 OR POLYASPARTIC OR POLYASPARTATE OR POLY(2A) (ASPARTIC OR A
 L5 76 S L4 AND(FLUORESCEN? OR FLUORIMET? OR FLORIMET?)
 L6 137 S L4(5A) (DETECT? OR DETERMIN? OR MEASUR? OR MONITOR? OR ASSAY?
 L7 10 S L5 AND L6
 L8 12 S L6 AND(WASTEWATER OR SCALE OR DRILLING OR SUGAR)
 L9 22 S L7-8

=> d l9 bib,ab 1-22

L9 ANSWER 1 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 141:370174 CA
 TI Research on the performance of calcium sulphate **scale** inhibition by
 polyaspartic acid and its combinations
 AU Shao, Hui; Leng, Yixin
 CS Jiangsu Institute of Petrochemical Technology, Changzhou, 210016, Peop.
 Rep. China
 SO Gongye Shuichuli (2003), 23(7), 30-32
 CODEN: GOSHFA; ISSN: 1005-829X
 PB Gongye Shuichuli Zazhishe
 DT Journal
 LA Chinese
 AB Polyaspartic acid was prepd. by thermal polymn. of L-aspartic acid, which
 can be hydrolyzed to its Na salt. The relative mol. wt. (Mw) was measured
 with GPC. The inhibition rate to CaSO4 **scale** was up to 90%, as the
 dosage of polyaspartic acid reached 4 mg L-1. It was better than that of
 polymaleic acid and polyacrylic acid. The amt. of the combination of
 polyaspartic acid and Na citrate was 5 mg L-1, the inhibition rate reached
 90%, and that of polyaspartic acid and Na5P3O10 was up to 88%.
 Polyaspartic acid and its combinations were perfect to be applied in high
 temp. water system.

L9 ANSWER 2 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 141:42846 CA
 TI Polyion complex micelles entrapping cationic dendrimer porphyrin:
 effective photosensitizer for photodynamic therapy of cancer
 AU Zhang, Guo-Dong; Harada, Atsushi; Nishiyama, Nobuhiro; Jiang, Dong-Lin;
 Koyama, Hiroyuki; Aida, Takuzo; Kataoka, Kazunori
 CS Graduate School of Engineering, Department of Materials Science and
 Engineering, The University of Tokyo, Bunkyo-ku, Tokyo, 113-8656, Japan
 SO Journal of Controlled Release (2003), 93(2), 141-150
 CODEN: JCREEC; ISSN: 0168-3659
 PB Elsevier
 DT Journal

LA English

AB Photosensitizers play a crucial role in the photodynamic therapy (PDT) of cancer. In this study, a third-generation aryl ether dendrimer porphyrin with 32 primary amine groups on the periphery, [NH₂CH₂CH₂NHCO]32DPZn, and pH-sensitive, polyion complex micelles (PIC) composed of the porphyrin dendrimer and PEG-b-poly(**aspartic acid**), were **evaluated** as new photosensitizers (PSSs) for PDT in the Lewis Lung Carcinoma (LLC) cell line. The preliminary photophys. characteristics of [NH₂CH₂CH₂NHCO]32DPZn and the corresponding micelles were investigated. Electrostatic assembly resulted in a red-shift of the Soret peak of the porphyrin core and the enhanced **fluorescence**. Compared to the dendrimer porphyrin [NH₂CH₂CH₂NHCO]32DPZn, relatively low cellular uptake of dendrimer porphyrin [NH₂CH₂CH₂NHCO]32DPZn incorporated in the PIC micelle was obsd., yet the latter exhibited enhanced photodynamic efficacy on the LLC cell line. Importantly, the use of PIC micelles as a delivery system reduced the dark toxicity of the cationic dendrimer porphyrin, probably due to the biocompatible PEG shell of the micelles.

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 140:411913 CA

TI **Evaluation** method of biodegradability of **polyaspartic acids**-like **scale** inhibitors

AU Huang, Yuan-xing; Lei, Zhong-fang

CS Department of Environmental Science and Engineering, Fudan University, Shanghai, 200433, Peop. Rep. China

SO Fudan Xuebao, Ziran Kexueban (2003), 42(6), 1053-1057
CODEN: FHPTAY; ISSN: 0427-7104

PB Fudan Daxue Chubanshe

DT Journal

LA Chinese

AB A new evaluation method, shaking-bottle incubating test, is introduced to **assess** the biodegradability of **polyaspartic acids** (PASP). Besides, the corresponding evaluation stds. are also proposed, with which the biodegradability of 10 kinds of PASP have been obtained.

L9 ANSWER 4 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 139:130240 CA

TI Enhancing microdialysis recovery of metal ions by incorporating poly-L-aspartic acid and poly-L-histidine in the perfusion liquid

AU Mogopodi, Dikabo; Torto, Nelson

CS Department of Chemistry, University of Botswana, Gaborone, 00704, Botswana

SO Analytica Chimica Acta (2003), 482(1), 91-97
CODEN: ACACAM; ISSN: 0003-2670

PB Elsevier Science B.V.

DT Journal

LA English

AB A study of the **evaluation** of **poly-L-aspartic acid** and **poly-L-histidine** as binding agents to enhance microdialysis recovery of metal ions is presented. Investigations were carried out to compare microdialysis recovery for Cr, Cu, Ni, and Pb when using water as the perfusion liq. as well as when using various concns. of poly-L-aspartic acid and poly-L-histidine in the perfusion liq. All expts. were carried out under quiescent conditions using a concentric type of microdialysis probe fitted with a polysulfone membrane having a 30 kDa mol. wt. cut-off and a 10 mm effective dialysis length. The metal ions were detd. using an electrothermal at. absorption spectrometer equipped with a Zeemann

background corrector. Incorporation of 0.032% (w/v) of poly-L-aspartic acid enhanced the recovery of Cu and Pb by factors of 90 and 64%, resp. (%RSD<3). The recovery of Cr was enhanced by 5%, but that of Ni never exceeded values achieved using ultra pure water. The use of 20% (w/v) of poly-L-histidine resulted in enhancement factors of 66 and 4% for Cu and Pb, resp. (%RSD<2). For both Cr and Ni, the recovery never exceeded that achieved with water. The data from these studies demonstrate the suitability of poly-L-aspartic and poly-L-histidine as selective and effective binding agents that enhance the microdialysis recovery of metal ions. Application of the optimized conditions to the detn. of Pb and Cu in a **wastewater** sample confirmed the versatility of microdialysis, as higher recoveries of Cu were obtained with **poly-L-aspartic acid** compared to direct **detn.**

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 138:340522 CA

TI Thermal polyaspartates as dual function corrosion and mineral **scale** inhibitors

AU Fan, Joseph C.; Fan, Lai Duen Grace; Liu, Quing Wei; Reyes, Hector

CS Donlar BioPolymers, Inc., Bedford Park, IL, 60501, USA

SO Polymeric Materials Science and Engineering (2001), 84, 426-427
CODEN: PMSEDG; ISSN: 0743-0515

PB American Chemical Society

DT Journal

LA English

AB **Poly(aspartic acid)**-based chems. were **evaluated** as environmentally friendly and biodegradable oil-field chems. for use as corrosion inhibitors and **scale** inhibitors in brine-injection petroleum recovery, esp. with respect to calcium compatibility and their effect on oil-water sepn., in the presence of a no. of different brines (esp. North Sea brines). At pH 5, poly(aspartates) was resistant to pptn. at a Ca²⁺ concns. of 8500 ppm and 7500 ppm, in comparison to a Ca²⁺ concn. of 5000 ppm for phosphonate and maleic acid polymer products. At a 5 wt.% concn. of the poly(aspartates), the Ca²⁺ compatibility was superior to the phosphonate and maleic acid polymer products. At the 5 ppm level, the **poly(aspartates)** outperformed all other inhibitors **tested** for **scale** control capacity. The poly(aspartates) also did not interfere with the oil-water sepn. process.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 138:281720 CA

TI LightCycler qPCR optimization for low copy number target DNA

AU Teo, I. A.; Choi, J. W.; Morlese, J.; Taylor, G.; Shaunak, S.

CS Faculty of Medicine, Division of Investigative Science, Department of Infectious Diseases, Imperial College at Hammersmith Hospital, London, W12 ONN, UK

SO Journal of Immunological Methods (2002), 270(1), 119-133

CODEN: JIMMBG; ISSN: 0022-1759

PB Elsevier Science B.V.

DT Journal

LA English

AB The LightCycler is a rapid air-heated thermal cyclor which incorporates a fluorometer for the detection and quantification of Polymerase Chain Reaction (PCR) amplified products. It provides real-time cycle-by-cycle

anal. of product generation. Amplification occurs in glass capillary tubes. The products are detected using a **fluorescent** double stranded DNA binding dye or **fluorescent** probes. However, conditions that work well in conventional PCR reactions do not readily translate to the LightCycler. While using this new technol. to study an infectious pathogen in human tissue samples, several parameters were identified which can have an adverse effect on the reliable and reproducible quantification of low copy no. target DNA. They included abstraction of PCR reagents on glass, primer-dimer formation, non-specific product generation, and a failure to amplify low copy no. target when it is present in a high background of human chromosomal DNA. For each problem identified, several solns. are described. Novel approaches are also described to ensure that amplification of target DNA and of the quantification stds. occurs with the same efficiency. With appropriate changes to the protocols currently in use, LightCycler quant. Polymerase Chain Reaction (LC-qPCR) can be used to achieve a level of accuracy that exceeds that of an enzyme immunoassay. The LC-qPCR optimization strategies described are of particular relevance when applying this technol. to the study of pathogens in tissue samples. The technique offers the enormous potential for reliable and reproducible quant. PCR of low copy no. target DNA.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 137:152017 CA

TI High throughput assay for monitoring polycation or polyanion molecular weight, degradation or synthesis

IN Mayer, Raphael; Shemesh, Simha; Ayal-HersHKovitz, Maty

PA Insight Strategy and Marketing Ltd., Israel

SO U.S. Pat. Appl. Publ., 27 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | US 2002115071 | A1 | 20020822 | US 2001-753692 | 20010104 |
| | US 6630295 | B2 | 20031007 | | |
| PRAI | US 2001-753692 | | 20010104 | | |

AB A method of testing an agent for its potential at modulating induction of a mol. wt. change of a first polyion is disclosed. The method is effected by (a) subjecting the first polyion to conditions under-which the first polyion undergoing the mol. wt. change in a presence, in an absence or under several different concns. of the agent; (b) interacting the first polyion with a second polyion having an opposite charge, the second polyion being **fluorescently** labeled; (c) providing reaction conditions so as to allow mol. wt. discriminative interaction between the first polyion and the second polyion; and (d) employing a **fluorescence** polarization assay for detg. a modulating effect of the agent on the induction of the mol. wt. change of the first polyion.

L9 ANSWER 8 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 136:379295 CA

TI Methods for the **determination** of **polyaspartic** acid in liquid media using laser **fluorescence** spectroscopy

IN Huthuff, Sven; Hertel, Martin

PA H & W Optical Instruments GmbH, Germany

SO Ger. Offen., 4 pp.

STN Columbus

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|------------------|------|----------|------------------|----------|
| PI | DE 10053864 | A1 | 20020516 | DE 2000-10053864 | 20001027 |
| PRAI | DE 2000-10053864 | | 20001027 | | |

AB Methods for the **detn.** of **polyaspartic** acid or its derivs. in aq. formulations and liq. media by **fluorescence** spectroscopy are described which entail the use of a laser to induce the **fluorescence**.

L9 ANSWER 9 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 136:217235 CA

TI **Determining** concentrations of **polyaspartic** acid by fluorometry

IN Klein, Thomas; Klaus, Thomas; Elschner, Andreas; Moritz, Ralf-johann; Cordes, Monika

PA Bayer Aktiengesellschaft, Germany

SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|------------------|----------|
| PI | WO 2002018458 | A1 | 20020307 | WO 2001-EP9557 | 20010820 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | DE 10042498 | A1 | 20020411 | DE 2000-10042498 | 20000830 |
| | AU 2001082104 | A5 | 20020313 | AU 2001-82104 | 20010820 |
| | EP 1315762 | A1 | 20030604 | EP 2001-960679 | 20010820 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 2002077262 | A1 | 20020620 | US 2001-939131 | 20010824 |
| PRAI | DE 2000-10042498 | A | 20000830 | | |
| | WO 2001-EP9557 | W | 20010820 | | |

AB In the title process, esp. useful in **detg.** **poly(aspartic acid)** (I) in use as a **scale** inhibitor in water treatment, concns. of I or its salts of 0.1-1000 ppm are detd. by fluorometry.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 136:118805 CA

TI Polyaspartate and its **scale**-inhibition

AU Shao, Hui; Leng, Yi-xin

CS Department of Chemical Engineering, Jiangsu Institute of Petrochemical Technology, Changzhou, 213016, Peop. Rep. China

SO Jiangsu Shiyong Huagong Xueyuan Xuebao (2001), 13(1), 18-20

CODEN: JSHXPU; ISSN: 1005-8893

PB Jiangsu Shiyong Huagong Xueyuan Xuebao Bianjibu

STN Columbus

DT Journal
LA Chinese
AB This article presents a lab. synthetic method of the thermal polymn. of maleic acid and ammonia. Static method is used to **evaluate polyaspartate** inhibitor of calcium carbonate **scales**. Transmittance technique is used to **evaluate polyaspartate** dispersing iron oxide. The exptl. results showed that the copolymer had high efficiency of **scale**-inhibition and dispersing iron oxide for cooling water treatment.

L9 ANSWER 11 OF 22 CA COPYRIGHT 2005 ACS on STN
Full Text
AN 135:36624 CA
TI Comparison and **evaluation** of the synthetic biopolymer **poly-l-aspartic** acid and the synthetic "plastic" polymer poly-acrylic acid for use in metal ion-exchange systems
AU Miller, T. C.; Holcombe, J. A.
CS Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, 78712, USA
SO Journal of Hazardous Materials (2001), 83(3), 219-236
CODEN: JHMAD9; ISSN: 0304-3894
PB Elsevier Science B.V.
DT Journal
LA English
AB Poly-L-aspartic acid (PLAsp), a biopolymer, and a similar synthetic polymer, poly-acrylic acid (PAA), each consisting of ~50 repeating Asp and acrylic acid monomers, resp., were immobilized onto controlled pore glass (CPG) and evaluated for use as metal ion-exchange materials. Both polymers achieve metal complexation primarily through their repeating carboxylate side groups resulting in a similar binding trend for the metals tested (Ca²⁺, Cd²⁺, Co²⁺, Cu²⁺, Mg²⁺, Mn²⁺, Na⁺, Ni²⁺, Pb²⁺), with metal binding capacities <0.1-12 µmol metal/g column and <0.1-32 µmol metal/g column for PLAsp and PAA, resp. Cu²⁺ and Pb²⁺ exhibited strong binding to both materials, while the other metals demonstrated only weak or minimal binding. Both columns allowed for quant. release of bound metals through acid stripping and experienced increased overall metal binding with increasing pH. Both systems also maintained similar structural and chem. stability when continuously exposed to neutral buffered, highly acidic, oxidizing, large mol. rich, and elevated temp. environments. The main differences between the two systems are the material cost and system biodegradability.

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 22 CA COPYRIGHT 2005 ACS on STN
Full Text
AN 134:337936 CA
TI Method of measuring physiological function
IN Dorshow, Richard Bradley; Achilefu, Samuel; Rajagopalan, Raghavan; Bugaj, Joseph Edward
PA Mallinckrodt Inc., USA
SO U.S., 20 pp., Cont.-in-part of U.S. 5,928,625.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | US 6228344 | B1 | 20010508 | US 1999-258148 | 19990226 |
| | US 5928625 | A | 19990727 | US 1997-816332 | 19970313 |
| | CA 2360421 | AA | 20000831 | CA 2000-2360421 | 20000120 |

STN Columbus

WO 2000050093 A1 20000831 WO 2000-US1322 20000120
W: CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE
EP 1154802 A1 20011121 EP 2000-902449 20000120
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
JP 2002537363 T2 20021105 JP 2000-600703 20000120
US 6280703 B1 20010828 US 2000-519455 20000306
PRAI US 1997-816332 A2 19970313
US 1999-258148 A 19990226
WO 2000-US1322 W 20000120
AB A method of measuring physiol. function of a group of body cells, includes
the step of selecting a detectable agent capable of emitting a measurable
electromagnetic emission. The agent is introduced into body fluid which
contacts the group of body cells. The emission is measured, and physiol.
function is detd. based on measurement of the emission.
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 134:256523 CA

TI Development of environmentally benign **scale** inhibitors for industrial
applications

AU Hater, Wolfgang; Mayer, Bernd; Schweinsberg, Matthias

CS Germany

SO PowerPlant Chemistry (2000), 2(12), 721-724, 752-755

CODEN: POCHFT; ISSN: 1438-5325

PB PowerPlant Chemistry GmbH

DT Journal

LA English

AB Polyaspartic acid and polysaccharide derivs. were used as starting
materials for the development of an ecol. sound **scale** inhibitor. BaSO₄,
CaSO₄, and CaCO₃ stabilization was tested and the results were compared
with those of products based on phosphonic acids. Of all the inhibitors
tested, only **polyaspartates** exhibit good **scale** inhibition against
all 3 minerals, whereas phosphonates are completely ineffective against
CaSO₄ and saccharides exhibit inferior inhibition against BaSO₄ **scale**.
Two field tests on the application of inhibitors on the base of
polyaspartates are described: BaSO₄ inhibition in coal mine drainage and
CaSO₄ inhibition at a power station.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 133:205084 CA

TI In vivo method of measuring kidney or liver function with **fluorescent**
dye clearanceIN Dorshow, Richard Bradley; Achilefu, Samuel; Rajagopalan, Raghavan; Bugaj,
Joseph Edward

PA Mallinckrodt Inc., USA

SO PCT Int. Appl., 52 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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PI WO 2000050093 A1 20000831 WO 2000-US1322 20000120
W: CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE
US 6228344 B1 20010508 US 1999-258148 19990226
CA 2360421 AA 20000831 CA 2000-2360421 20000120
EP 1154802 A1 20011121 EP 2000-902449 20000120
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
JP 2002537363 T2 20021105 JP 2000-600703 20000120
PRAI US 1999-258148 A 19990226
US 1997-816332 A2 19970313
WO 2000-US1322 W 20000120
AB A method of measuring physiol. function of a group of body cells, includes
the step of selecting a detectable agent capable of emitting a measurable
electromagnetic emission. The agent is introduced into body fluid which
contacts the group of body cells. The emission is measured, and physiol.
function is detd. based on measurement of the emission. **Fluorescent**
dyes conjugated to physiol. acceptable polyanionic carries are used.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 15 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 133:182562 CA
TI Testing and prevention of membrane fouling in RO applications using
Dequest antiscalants
AU Trehy, Michael L.; Ledent, Michel
CS Marketing Technical Service, Solutia Inc, St. Louis, MO, 63166-6760, USA
SO Preprints of Extended Abstracts presented at the ACS National Meeting,
American Chemical Society, Division of Environmental Chemistry (2000),
40(2), 291-292
CODEN: PEACF2; ISSN: 1524-6434
PB American Chemical Society, Division of Environmental Chemistry
DT Journal
LA English
AB Simple lab. testing procedures to evaluation the ability of additives to
prevent the pptn. of sparingly sol. inorg. compds. and to disperse
suspended colloidal or particulate matter are discussed. The National
Assocn. of Corrosion Engineers (NACE) published methods to evaluate the
ability of additives to inhibit pptn. of minerals in water which are
typically complete in 20 h. Results using NACE method for CaSO4 are
presented. Low mol. wt. polyacrylates, polyaspartic acid and phosphates,
particularly Dequest 2000, Dequest 2054, and Dequest 2066, were highly
effective in preventing CaSO4 **scale** by threshold **scale** inhibition.
The importance of testing under conditions similar to that present in
reject water were demonstrated.
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 16 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 127:83155 CA
TI Gypsum **scale** formation on heat exchanger surfaces: the influence of
poly(acrylic acid), poly(aspartic acid), and poly(glutamic acid)
AU Amjad, Zahid
CS B.F. GOODRICH COMPANY, Advanced Technology Group, Cleveland, OH, 44141,
USA
SO Acta Polytechnica Scandinavica, Chemical Technology Series (1997), 244,
56-58

STN Columbus

CODEN: APSCF4

PB Finnish Academy of Technology

DT Journal

LA English

AB The performance of anionic polymers was examd. as potential inhibitors for inhibition of formation of gypsum **scale** (CaSO₄ dihydrate) from supersatd. CaSO₄ solns. on brass heat exchanger surfaces. Anionic polymers studied were: (1) poly(acrylic acid), (2) poly(aspartic acid), and poly(glutamic acid). At 0.20 ppm inhibitor concn., all three of the above compds. were effective in inhibiting **scale** formation, of which poly(acrylic acid) was the most active. In contrast, use of a cationic polymer [poly(diallyldimethylammonium chloride)] and a neutral polymer (polyacrylamide) resulted in only a slight decrease in **scale** formation.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 17 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 126:306204 CA

TI Polyaspartate **scale** inhibitors - biodegradable alternatives to polyacrylates

AU Ross, Robert J.; Low, Kim C.; Shannon, James E.

CS Donlar Corp., Bedford Park, IL, 60501, USA

SO Materials Performance (1997), 36(4), 53-57

CODEN: MTPFBI; ISSN: 0094-1492

PB NACE International

DT Journal

LA English

AB Polyaspartates are highly biodegradable alternatives to polyacrylate-based **scale** inhibitors. This article presents lab. **testing** data on **polyaspartate** inhibitors of calcium and barium mineral **scales**. The optimum mol. wt. (Mw) for polyaspartate inhibitors of calcium carbonate, calcium sulfate, and barium sulfate mineral **scales** was detd. to be between 1,000 Mw and 4,000 Mw. For inhibition of calcium carbonate and barium sulfate, polyaspartates in the range of 3,000 Mw to 4,000 Mw were most effective. For calcium sulfate inhibition, the optimum Mw lies in the 1,000 Mw to 2,000 Mw range. Biodegradability data (OECD 301B Ready Biodegradability) on polyaspartates of a variety of Mw is also presented, which demonstrates the high biodegradability of this class of mineral **scale** inhibitors.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 18 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 124:25014 CA

TI Validated **fluorimetric** HPLC analysis of acetaldehyde in hemoglobin fractions separated by cation exchange chromatography: three new peaks associated with acetaldehyde

AU Chen, Hui-Min; Scott, B. Keyes; Braun, Karen P.; Peterson, Charles M.

CS Sansum Med. Res. Found., Santa Barbara, CA, USA

SO Alcoholism: Clinical and Experimental Research (1995), 19(4), 939-44

CODEN: ACRSDM; ISSN: 0145-6008

PB Williams & Wilkins

DT Journal

LA English

AB Stable Hb-acetaldehyde adducts present in Hb fractions sepd. by **polyaspartic** acid cation exchange chromatog. were **quantified** by **fluorimetric** HPLC. The **fluorescent** species eluted from the HPLC was confirmed by mass spectrometry to be consistent with the expected product

from reaction of acetaldehyde, 1,3-cyclohexanedione (CHD), and ammonium ion. Hemolyzate (2.2 mM Hb) was incubated in equiv. vols. of either phosphate-buffered saline or 5 mM acetaldehyde at 37° for 30 min and washed three times with H₂O to remove free acetaldehyde and labile adducts before the injection of 14.7 mg Hb onto the cation exchange column. **Fluorimetric** HPLC anal. of hemolyzate samples either with or without in vitro reaction with acetaldehyde revealed that most acetaldehyde resides in the Hb A0 fraction. The reaction with acetaldehyde in vitro resulted in a significant increase in fast-eluting minor Hb species on cation exchange chromatog. concomitant with increased acetaldehyde in the HbAla+b, HbAlc, and HbAl-AcH fractions. We report three new cation exchange chromatog. peaks after reaction with acetaldehyde: HbAl-AcH-3, HbAlc-1, and HbA0-1. Each new peak was found to assoc. with a significant quantity of CHD-reactive acetaldehyde. These expts. provide addnl. evidence that stable adducts form between acetaldehyde and Hb and that these adducts occur in multiple Hb species sepd. by cation exchange chromatog. Further characterization and structural assignment of these species are warranted in view of their potential utility as markers for ethanol intake.

L9 ANSWER 19 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 122:195857 CA

TI Biodegradation of thermally synthesized polyaspartate

AU Alford, Diana D.; Wheeler, A. P.; Pettigrew, Charles A.

CS Dep. Biological Sci., Clemson Univ., Clemson, SC, 29634, USA

SO Journal of Environmental Polymer Degradation (1994), 2(4), 225-36
CODEN: JEPDED; ISSN: 1064-7546

PB Plenum

DT Journal

LA English

AB Polyaspartate, synthesized using thermal method (thermal polyaspartate; TPA), has dispersant and crystn. inhibition activities. These activities suggest the polymer may be used in water treatment, paper processing, and as a detergent and paint additive. The com. potential for TPA is enhanced because it can be synthesized on a large **scale**; therefore, a study of the biodegrdn. of the polymer was conducted. TPA was produced by hydrolysis of a polysuccinimide synthesized by dry thermal polymn. of aspartic acid. The resulting polymer was a poly(α,β -DL-aspartate) having a 70% β structure and contg. a racemic mixt. of aspartic acid. TPA was incubated with both dil. effluent and activated sludge from a **wastewater** treatment plant. Low-biomass effluent expts. showed changes in TPA mol. size concomitant with O demand induced by the polymer, suggesting TPA's susceptibility to at least partial biodegrdn. Low-biomass sludge expts. (SCAS, modified Strum) yielded ~70% mineralization of 20 mg/L TPA in 28 days, suggesting that a significant portion of the polymer was labile. High-biomass sludge expts. using ¹⁴C-TPA at 1 mg/L, showed ~30% mineralization and 95% total removal of TPA carbon from soln. in 23 days, with most mineralization and removal occurring in <5 days. Addnl. short-term studies using a variety of particulate substrates, including activated sludge, confirmed that TPA is subject to removal from soln. by adsorption. From labeled TPA studies, it was concluded that TPA is subject to rapid removal and at least partial degrdn. in a **wastewater** treatment plant. Using gel and thin-layer chromatog., it was detd. that at least part of the unmineralized residue from high biomass **assays** was **polyaspartate**. It is speculated that TPA's unusual structure compared to natural proteins may limit the rate of proteolysis of the polymer and thus its overall degrdn. rate.

L9 ANSWER 20 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 117:43350 CA

TI Specific inhibition of *Physarum polycephalum* DNA-polymerase- α -primase by poly(L-malate) and related polyanions

AU Holler, Eggehard; Achhammer, Gunthar; Angerer, Bernhard; Gantz, Birgit; Hambach, Christoph; Reisner, Hermine; Seidel, Bettina; Weber, Cornelia; Windisch, Christina; et al.

CS Inst. Biophys. Phys. Biochem., Univ. Regensburg, Regensburg, Germany

SO European Journal of Biochemistry (1992), 206(1), 1-6

CODEN: EJBCAI; ISSN: 0014-2956

DT Journal

LA English

AB Poly(L-malate) is an unusual polyanion found in nuclei of plasmodia of *P. polycephalum*. An investigation was carried out using enzymic and **fluorimetric** methods to det. whether poly(L-malate) and structurally related polyanions can interact with DNA-polymerase- α -primase complex and with histones of *P. polycephalum*. Poly(L-malate) is found to inhibit the activities of the DNA-polymerase- α -primase complex and to bind to histones. The mode of inhibition is competitive with regard to DNA in elongation and noncompetitive in the priming of DNA synthesis. Spermidine, spermine, and histones from *P. polycephalum* and from calf thymus bind to poly(L-malate) and antagonize the inhibition. The polyanions poly(vinyl sulfate), poly(acrylate), poly(L-malate), poly(D,L-malate), **poly(L-aspartate)**, **poly(L-glutamate)** have been **examd.** for their potency to inhibit the DNA polymerase. The degree of inhibition depends on the distance between neighboring charges, given by the no. of atoms (N) interspaced between them. Poly(L-malate) (N = 5) and poly(D,L-malate) (N = 5) are the most efficient inhibitors, followed by **poly(L-aspartate)** (N = 6), **poly(acrylate)** (N = 3), poly(L-glutamate) (N = 8), poly(vinyl sulfate) (N = 3). It is proposed that poly(L-malate) interacts with DNA-polymerase- α -primase of *P. polycephalum*. According to its phys. and biochem. properties, poly(L-malate) may alternatively function as a mol. chaperone in nucleosome assembly in the S phase and as both an inhibitor and a stock-piling agent of DNA-polymerase- α -primase in the G2 phase and M phase of the plasmodial cell cycle.

L9 ANSWER 21 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 110:63664 CA

TI Hemoglobin, transferrin and albumin/**polyaspartic** acid microspheres as carriers for the cytotoxic drug adriamycin. I. Ultrastructural appearance and drug content

AU Chen, Yan; Willmott, N.; Anderson, J.; Florence, A. T.

CS Sch. Pharm. Pharmacol., Univ. Strathclyde, Glasgow, G1 1XW, UK

SO Journal of Controlled Release (1988), 8(2), 93-101

CODEN: JCREEC; ISSN: 0168-3659

DT Journal

LA English

AB Microspheres prepd. from transferrin, Hb and **polyaspartic** acid in admixt. with albumin were evaluated as alternative to albumin systems as vehicles for the anticancer drug adriamycin. Electron microscopy showed that transferrin and albumin/**polyaspartic** acid (195 mg/5 mg) microspheres are similar to albumin, possessing neither internal discontinuities nor surface pores, whereas Hb microspheres exhibit both. Assessment of drug content revealed that transferrin (6.9 μ g/mg) and Hb microspheres (8.6 μ g/mg) contained amts. of adriamycin that were not significantly different to albumin (9.0 μ g/mg), whereas incorporation of **polyaspartic** acid into the albumin system led to an increase of 3-4

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fold in native drug content. For albumin/**polyaspartic** acid microspheres values for drug content were in close agreement when assessed by HPLC and total **fluorescence** measurements, whereas for microspheres prep'd. from pure proteins total **fluorescence** values were 34-100% higher. An adriamycin-derived species was **detected** in albumin, but not albumin/**polyaspartic** acid microspheres, that did not co-chromatograph with native drug on TLC. Together these data indicate that a proportion of drug is present in other than native form in microspheres prep'd. from pure proteins.

L9 ANSWER 22 OF 22 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 66:16961 CA

TI Extending the range of application of the Edman method. Application to short peptides in small amounts

AU Nedkov, P.; Genov, N.

CS Bulgarian Acad. Sci., Sofia, Bulg.

SO Biochimica et Biophysica Acta (1966), 127(2), 541-3

CODEN: BBACAQ; ISSN: 0006-3002

DT Journal

LA English

AB A micromodification of the phenylthiohydantoin method for the degradation of peptides was devised, whereby the full sequences from the N- to the C-terminal residues of Thr-Ala-Leu, Glu-Ala-Leu-Ile, and Ala-Leu-Glu-Phe-Arg were det'd. in amts. of 0.2 micromole. The method also made possible the detn. of the amides of glutamic and aspartic acids. To det. the N-terminal residue to the starting or shortened peptide, a combination of the **fluorescent** end-group reagent (1-dimethylamino-5-naphthalenesulfonyl chloride) of Gray and Hartley (CA 60, 9507b) and thin-layer chromatography was used. Silica gel G plates were used for the latter, developing the 1-dimethylamino-5-naphthalenesulfonyl derivs. with CHCl₃-AcOEt-MeOH-AcOH (9:15:4.5:0.2) or AcOEt-iso-PrOH-concd. NH₃ (8:20:6).

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COST IN U.S. DOLLARS

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|------------|---------|
| ENTRY | SESSION |
| 131.31 | 204.09 |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
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 NEWS 10 DEC 17 COMPUAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
 NEWS 11 DEC 17 SOLIDSTATE reloaded; updating to resume; current-awareness alerts (SDIs) affected
 NEWS 12 DEC 17 CERAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
 NEWS 13 DEC 17 THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
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 NEWS 16 JAN 03 No connect-hour charges in EPFULL during January and February 2005
 NEWS 17 JAN 26 CA/CAPLUS - Expanded patent coverage to include the Russian Agency for Patents and Trademarks (ROSPATENT)

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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FILE LAST UPDATED: 3 Feb 2005 (20050203/ED)

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=> s amino acid homopolymers/ti and capillary gel electrophoresis/ti
    180603 AMINO/TI
      6 AMINOS/TI
    180607 AMINO/TI
      ((AMINO OR AMINOS)/TI)
    788601 ACID/TI
    261645 ACIDS/TI
    1029410 ACID/TI
      ((ACID OR ACIDS)/TI)
    1180 HOMOPOLYMERS/TI
      11 AMINO ACID HOMOPOLYMERS/TI
        ((AMINO(W)ACID(W)HOMOPOLYMERS)/TI)
    37582 CAPILLARY/TI
      2379 CAPILLARIES/TI
    39722 CAPILLARY/TI
      ((CAPILLARY OR CAPILLARIES)/TI)
    65915 GEL/TI
    18609 GELS/TI
    83742 GEL/TI
      ((GEL OR GELS)/TI)
    37426 ELECTROPHORESIS/TI
      242 CAPILLARY GEL ELECTROPHORESIS/TI
        ((CAPILLARY(W)GEL(W)ELECTROPHORESIS)/TI)
L1      1 AMINO ACID HOMOPOLYMERS/TI AND CAPILLARY GEL ELECTROPHORESIS/TI
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L1 1 S AMINO ACID HOMOPOLYMERS/TI AND CAPILLARY GEL ELECTROPHORESIS/

=> d bib,ab

L1 ANSWER 1 OF 1 CA COPYRIGHT 2005 ACS on STN

Full Text

AN 118:142831 CA

TI Separation of **amino acid homopolymers** by **capillary gel electrophoresis**

AU Dolnik, Vladislav; Novotny, Milos V.

CS Dep. Chem., Indiana Univ., Bloomington, IN, 47405, USA

SO Analytical Chemistry (1993), 65(5), 563-7

CODEN: ANCHAM; ISSN: 0003-2700

DT Journal

LA English

AB Gel-filled capillaries using highly concd. and moderately cross-linked acrylamide-type gels in capillary electrophoresis were successfully applied to the sepn. of the individual oligomers of various poly(amino acids). Mixts. of both anionic and cationic nature were adequately resolved. While UV detection at 220 nm was mostly used, the polyanions with N-terminal groups can also be tagged with 3-(4-carboxybenzoyl)-2-quinolinecarboxaldehyde (CDQCA) for a more sensitive detection by a

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laser-induced fluorescence detector.

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COST IN U.S. DOLLARS

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FULL ESTIMATED COST

14.17

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